WHAT IS CLAIMED IS:

1. A spark plug comprising:

a center electrode;

a ground electrode opposing the center electrode in such a manner as to define a spark discharge gap between the center electrode and the ground electrode; and

an igniter fixed to at least one of the center electrode and the ground electrode in such a manner as to face the spark discharge gap, the igniter being composed of a metallic material whose principal component is one of a platinum and an iridium, the metallic material of the igniter comprising an oxygen content of not more than 120 ppm.

2. The spark plug as claimed in claim 1, in which the metallic material which composes the igniter and whose principal component is the one of the platinum and the iridium is an alloy containing a sub-component of a nickel.

3. The spark plug as claimed in claim 1, in which the metallic material composing the igniter is at least one of a platinum-nickel alloy, a platinum-iridium alloy, a platinum-iridium-nickel alloy, and an iridium-nickel alloy.

4. The spark plug as claimed in claim 3; in which the platinum-nickel alloy contains the nickel in a range from 2% to 40% of a total mass; in which the platinum-iridium alloy contains the iridium in a range from 2% to 98% of the total mass; in which the platinum-iridium-nickel alloy contains the iridium in a range from 2% to 40% of the total mass and contains the nickel in a range from 2% to 40% of the total mass, each of the iridium and the nickel of the platinum-iridium-nickel alloy being lower than the platinum in respect of a percentage content of the total mass; and in which the iridium-nickel alloy contains the nickel not less than 2% of the total mass.

5. The spark plug as claimed in claim 1, in which the spark discharge gap defined between the center electrode and the ground electrode is not more than 0.6 mm.

6. The spark plug as claimed in claim 5, in which the spark discharge gap defined between the center electrode and the ground electrode is in a range from 0.2 mm to 0.6 mm.

7. The spark plug as claimed in claim 1, in which the spark plug is mounted on an internal combustion engine which is a gas engine.

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8. A spark plug comprising:

a center electrode;

a ground electrode opposing the center electrode in such a manner as to define a spark discharge gap between the center electrode and the ground electrode; and

an igniter fixed to at least one of the center electrode and the ground electrode in such a manner as to face the spark discharge gap, the igniter being composed of a metallic material whose principal component is one of a platinum and an iridium, the metallic material of the igniter comprising a crystal grain of not less than 50 μm in a mean diameter, and comprising an oxygen content of not more than 300 ppm.

9. The spark plug as claimed in claim 8, in which the mean diameter of the crystal grain of the igniter is defined as a mean value of a maximum interval between a pair of parallel lines which are tangent to an outline of the crystal grain.

10. The spark plug as claimed in claim 8, in which the metallic material which composes the igniter and whose principal component is the one of the platinum and the iridium is an alloy containing a sub-component of a nickel.

11. The spark plug as claimed in claim 8, in which the metallic material composing the igniter is at least one of a platinum-nickel alloy, a platinum-iridium alloy, a platinum-iridium-nickel alloy, and an iridium-nickel alloy.

12. The spark plug as claimed in claim 11; in the platinum-nickel alloy contains the nickel in a range from 2% to 40% of a total mass; in which the platinum-iridium alloy contains the iridium in a range from 2% to 98% of the total mass; in which the platinum-iridium-nickel alloy contains the iridium in a range from 2% to 40% of the

total mass and contains the nickel in a range from 2% to 40% of the total mass, each of the iridium and the nickel of the platinum-iridium-nickel alloy being lower than the platinum in respect of a percentage content of the total mass; and in which the iridium-nickel alloy contains the nickel not less than 2% of the total mass.

13. The spark plug as claimed in claim 8, in which the spark discharge gap defined between the center electrode and the ground electrode is not more than 0.6 mm.

14. The spark plug as claimed in claim 13, in which the spark discharge gap defined between the center electrode and the ground electrode is in a range from 0.2 mm to 0.6 mm.

15. The spark plug as claimed in claim 8, in which the spark plug is mounted on an internal combustion engine which is a gas engine.

16. A method of producing a spark plug, the method comprising the following sequential steps of:

carrying out a heat treatment on a metallic material chip at a heat treatment temperature of not less than 800° C and not more than a melting point of the metallic material chip, so that a crystal grain of the metallic material chip is not less than 50 μm in a mean diameter with the metallic material chip comprising an oxygen content of not more than 300 ppm, the metallic material chip comprising a principal component of one of a platinum and an iridium;

welding the metallic material chip to at least one of a center electrode and a ground electrode; and

forming an igniter based on the metallic material chip.

17. The method as claimed in claim 16; in which the heat treatment of the metallic material chip is carried out in one of a reduced pressure atmosphere and a hydrogen atmosphere, so that the metallic material chip is recrystallized to grow the crystal grain to not less than 50 μm in the mean diameter, the mean diameter of the crystal grain of the metallic material chip being defined as a mean value of a maximum interval between a pair of parallel lines which are tangent to an outline of the crystal

grain; and in which the metallic material chip comprising the platinum is subjected to a resistance welding while the metallic chip comprising the iridium is subjected to a laser welding.

18. A method of producing a spark plug, the method comprising the following sequential steps of:

welding a metallic material chip to at least one of a center electrode and a ground electrode, the metallic material chip comprising a principal component of one of a platinum and an iridium;

carrying out a heat treatment on the metallic material chip welded to the at least one of the center electrode and the ground electrode at a heat treatment temperature of not less than 800° C and not more than a melting point of the metallic material chip, so that a crystal grain of the metallic material chip is not less than 50 μm in a mean diameter with the metallic material chip comprising an oxygen content of not more than 300 ppm; and

forming an igniter based on the metallic material chip.

19. The method as claimed in claim 18; in which the heat treatment of the metallic material chip is carried out in one of a reduced pressure atmosphere and a hydrogen atmosphere, so that the metallic material chip is recrystallized to grow the crystal grain to not less than 50 μm in the mean diameter, the mean diameter of the crystal grain of the metallic material chip being defined as a mean value of a maximum interval between a pair of parallel lines which are tangent to an outline of the crystal grain; and in which the metallic material chip comprising the platinum is subjected to a resistance welding while the metallic chip comprising the iridium is subjected to a laser welding.